



FAA Certified No. XQ2R302L

## **PACIFIC MAGNETIC & PENETRANT CO., INC**

MAGNETIC AND PENETRANT INSPECTION  
PASSIVATION • GLASSBEAD • CHEMICAL ETCH



MT • PT  
CHEMICAL PROCESSING

May 26, 2006

Kim Muratore, Case Developer (SFD-7-B)  
U.S. EPA, Region 9  
75 Hawthorne Street  
San Francisco, CA. 94105

Re: General Notice Letter/104(e) for the San Fernando Valley/North Hollywood  
Superfund Site, North Hollywood, CA.

Dear Kim Muratore:

I updated my May 17, 2006 letter to include the second half of my responses (numbers 21-39) below along with the first half of my responses. This submission of the response in two halves was agreed upon with Mike Massey earlier this month. Please accept my apologies if this letter is somewhat redundant with my first correspondence.

I want to amend my response to question #19 as it pertains to part B regarding sumps. I accidentally omitted that PM&P has two in ground sumps. These sumps are 2' X 3' sq., epoxy sealed concrete with polypropylene tanks installed in ground. One sump is located in the bermed tank area where it is plumbed to the three-stage clarifier. This sump handles any non-hazardous water runoff that occurs in air-drying customers parts. The second sump is in the bermed area where the three-stage clarifier is located and used to control non-hazardous water flow immediately before going into the clarifier. Discovery of a map of the operations includes this information.

Your letter dated April 11, 2006 was addressed to Pacific Magnetic & Penetrant Co., Inc. ("PM&P"). I must object to what appears to be the letter's mischaracterization of the term "Facility." I do not agree that either location is a "Facility." To the extent that any location was once a "Facility," – it would not be PM&P's exclusive location at 6837 Farmdale Ave. For purposes of this response, I feel that I must separate 6829 Farmdale Ave. from 6837 Farmdale Ave. and am answering each question separately for the two locations.

Pacific Steel Treating Co., Inc. ("PST") operated exclusively at 6829 Farmdale Ave. and was a Heat Treating Company.

PM&P operates a Visual Inspection Laboratory Service Business at 6837 Farmdale Ave. PM&P operated exclusively at 6837 Farmdale Ave. In an effort to be complete about its operations, responses to questions herein for PM&P at 6837 Farmdale Ave. are described separately.

In January 2003 Pacwest Properties L.L.C. ("Pacwest") purchased 6829 Farmdale Ave. and 6837 Farmdale Ave.

In January 2003 PM&P started renting from Pacwest the property at 6829 Farmdale Ave. for warehouse storage of company records/paper supplies. In March 2006 PM&P started Visual Inspection Laboratory Services at 6829 Farmdale Ave.

### Response to Questions

1. Erik Bruun-Andersen  
6837 Farmdale Ave.  
North Hollywood, CA. 91605  
818-765-7266, President, 1992 - present
2. Pacific Steel Treating Co., Inc. ("PST") is responsible for environmental matters at 6829 Farmdale. PST operated exclusively at 6829 Farmdale Ave and did not operate at 6837 Farmdale Ave.

Pacific Steel Treating Co., Inc.  
1177 Dulzura Drive  
Santa Barbara, CA. 93108

PM&P operates at 6837 Farmdale Ave. The individual responsible for environmental matters is:

Erik Bruun-Andersen, President  
6837 Farmdale Ave.  
North Hollywood, CA. 91605, 818-765-7266.

3. Active
4. Incorporated 1992, South Dakota
5. Corporation. Its former business structure was a division of PST from 1978-1992.
6. PM&P did not operate at 6829 Farmdale Ave.  
PM&P operates at 6837 Farmdale Ave, North Hollywood, CA. 91605, as PM&P Co. from 1978-1992 and as PM&P Inc. from 1992 - present.
7. Articles of Incorporation for PM&P provided.
8. PM&P Co., 1978-1992, Fictitious business filing provided. Operated exclusively at 6837 Farmdale Ave.
9. Pacific Magnetic & Penetrant Co., was sold to Niels Bruun-Andersen, Sept. 1992.
10. PM&P investment in Pacwest Properties LLC in Feb. 2001.

11. PM&P started warehousing records/paper supplies at 6829 Farmdale Ave. in Jan. 2003. Before that Pacific Steel Treating Co., Inc. operated exclusively at 6829 Farmdale Ave.

Pacific Steel Treating Co., Inc.  
1177 Dulzura Dr.  
Santa Barbara, CA. 93108.

PM&P  
6837 Farmdale Ave.  
North Hollywood, CA. 91605

Owners and Former Owners:

Niels Bruun-Andersen, Former Officer Oct. 1992-April 1997 (Deceased)  
Niels Bruun-Andersen Trust April 1997- Dec.1998  
Erik Bruun-Andersen, President/

FX-6 Personal Privacy

12. PM&P never owned 6829 Farmdale Ave.  
PM&P never owned 6837 Farmdale Ave.
13. See Question 12.
14. PM&P warehoused records/paper supplies at 6829 Farmdale Ave., starting in Jan. 2003, from Pacwest Properties LLC.  
PM&P started Visual Inspection Laboratory Services at 6829 Farmdale Ave. in March 2006.  
PM&P has operated at 6837 Farmdale Ave. from 1978 to 1992 as a division of Pacific Steel Treating Co., Inc. and from 1992 to present as a corporation.
15. PM&P never leased or operated at 6829 Farmdale Ave. before Jan. 2003.

In Jan. 2003 when Pacwest purchased 6829 Farmdale Ave. PM&P started leasing from Pacwest. Lease Provided.

In Jan. 2003 when Pacwest purchased 6837 Farmdale Ave. PM&P started leasing from Pacwest. Lease Provided.

Owner:  
Pacwest Properties L.L.C.  
6837 Farmdale Ave.,  
North Hollywood, CA. 91605,  
818-765-7266

16. a. Pacific Steel Treating Co., Inc. owned 6829 Farmdale Ave. until January 2003. and sold to Pacwest Properties LLC in 2003. Previous to that, Pacific Steel Treating Co., Inc. owned/operated at 6829 Farmdale Ave.

- b. Heat Treating
- c. Pacific Steel Treating owned and controlled access to 6829 Farmdale Ave. until the sale in Jan 2003 to Pacwest Properties LLC. PM&P never owned or controlled access to the property at 6829 Farmdale Ave.
- d. Contact Pacific Steel Treating Co., Inc.

As for 6837 Farmdale Ave.

- a. PM&P Co., operated at 6837 Farmdale Ave. from 1978-1992  
PM&P Co., Inc., operated at 6837 Farmdale Ave. 1992-present.
  - b. Unknown before 1978.
  - c. Unknown
  - d. There was never a hazardous substance, pollutant, or contaminant release at 6837 Farmdale Ave. from 1978-present. PM&P Co., Inc was the only business to operate at 6837 Farmdale Ave. from 1978-present.
17. Historically, PM&P did not operate at 6829 Farmdale Ave. See Pacific Steel Treating Co., Inc. As of Jan. 2003 to date PM&P has occupied 6829 Farmdale Ave. PM&P leased warehouse space for records/paper supplies. Starting March 2006, PM&P leased the property at 6829 Farmdale Ave. for Visual Inspection Laboratory Services.

For 6837 Farmdale Ave:

PM&P Co., Inc.  
Erik Bruun-Andersen/President  
6837 Farmdale Ave.  
North Hollywood, CA. 91605, 818-765-7266  
1992-present

18. For 6829 Farmdale Ave, see Pacific Steel Treating Co., Inc. for all company issues/operations before Jan. 2003.

PM&P started in Jan. 2003 leasing 6829 Farmdale for warehouse space from Pacwest. PM&P started in March 2006 leasing 6829 Farmdale from Pacwest for Visual Inspection Laboratory Services. PM&P did not lease or occupy 6829 Farmdale Ave before those dates.

The property at 6837 Farmdale Ave:

PM&P operations at 6837 Farmdale Ave. are housed in a 4515 sq ft. building and employ 18 people. Services offered by PM&P include Visual Inspection Laboratory Service. No significant changes have occurred in the building size, number of employees or services provided since the Company's inception.

19. For 6829 Farmdale Ave:

- a. Map provided for PM&P's operations starting in March 2006.
- b. PM&P has two sumps in its operations (2'X3') that only non-hazardous water enters. One is used for non-hazardous water runoff from air drying customer parts. And the other is used to control non-hazardous water flow immediately before the three-stage clarifier. Both sumps are epoxy sealed concrete with polypropylene liners installed in ground.
- c. No groundwater or dry wells exist.
- d. Before March 2006, Unknown.  
Post March 2006 map provided.
- e. None known.
- f. Before March 2006, Unknown.  
Post March 2006. No dumps, leach fields or burn pits exist.

For 6837 Farmdale Ave.

- a. Map provided.
- b. PM&P has one sump in its operations (2'X3') that only non-hazardous water enters. It is used to control non-hazardous water flow immediately before the three-stage clarifier. Sump is epoxy sealed concrete with polypropylene liner installed in ground.
- c. No groundwater or dry wells exist.
- d. Normal stormwater drainage system and sanitary sewer system. No septic tanks or subsurface disposal fields.
- e. None
- f. No dumps leach fields or burn pits exist.

20. For 6829 Farmdale Ave. none.

For 6837 Farmdale Ave. chemical inventory form provided.

21. For the newly started PM&P operations at 6829 Farmdale, chemicals and hazardous substances are provided including chemical composition and quantities. MSDSs are also provided.

For 6837 Farmdale, chemicals and hazardous substances are provided including chemical composition and quantities. MSDSs are also provided.

22. Except as described below for chromium, PM&P does not and has not used, transported or received any of the listed chemicals in its operations at 6837 Farmdale Ave. Except as described below for chromium, PM&P does not and has not used, transported or received any of the listed chemicals in its operations at 6829 Farmdale Ave.

A March 26, 1998 letter from the U.S. EPA and Los Angeles Regional Water Quality Control Board to PM&P at 6837 Farmdale Ave (typo incorrectly says 6829 Farmdale Ave) states that the property (6837 Farmdale Ave) was inspected by Regional Staff and was determined "No Further Action" and that PM&P will

not be asked by the U.S. EPA or the Regional Board to participate in regional groundwater cleanup projects planned for the San Fernando Valley. The letter also states PM&P was no longer part of the U.S. EPA Superfund process, and the Regional Board and U.S. EPA plan no further action concerning PM&P. Signed by Keith A. Takata, Director Superfund Division, U.S. EPA, Region 9 and Dennis A. Dickerson, Executive Officer, CA. Regional Water Quality Control Board. Letter Included.

Chromium. PM&P uses a small amount of Sodium Bichromate and Chromic Acid in its operations. PM&P operations regarding chromium are very defined and limited in its use. PM&P has two 75-gallon polypropylene tanks in a batch process (no plumbing) that are contained in an epoxy sealed concrete berm with polypropylene protective flooring. PM&P operations require very limited use of chromium. The concentration of chromium in these polypropylene tanks is 2-3 % by volume. Because of the low usage of these solutions they are in operation for 6 months. Once the solution is spent we batch treat (unplumbed) in the polypropylene tank by adding sodium metabisulfite and the used chromium is reduced from hexavalent to trivalent chrome. At that point we move the tank to the filter press where all the filter cake is created. Sampled excess non-hazardous water is pumped to the above clarifier for permitted discharge to the sewer system. All operations and treatment are handled in a controlled environment with trained individuals according to OSHA requirements. PM&P is very conscientious and takes a very serious hands-on approach to handling chemicals.

A November 5, 1997 letter from Los Angeles Regional Water Control Board to PM&P at 6837 Farmdale Ave. states the during the Board Staff inspection of the property the company was, "observed to be clean and well maintained and no evidence of spillage was noted." "Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program." Signed by Eric Nupen, Senior Engineering Geologist. Letter Included.

- a. 1. Sodium Bichromate, 30 lbs used per year, MSDS provided.  
2. Chromic Acid, 14 lbs used per year. MSDS provided.
  - b. Including both storage areas and operations all Sodium bichromate and chromic acid are kept in polypropylene tanks in epoxy sealed concrete berms. Roofing covers all storage areas and operations.
  - c. All used chromium is reduced from hexavalent to trivalent by batch process in polypropylene tanks using sodium metabisulfite, filtered pressed in a bermed and epoxy sealed concrete berm, then manifested and transported by a licensed hauler to a permitted off-site recycling facility.
  - d. Chromic Acid purchased at 30 lbs. every two years. Sodium bichromate purchased at 30 lbs annually.
  - e. Sodium Bichromate, mfg. by Occidental Chemical Corporation, Dallas TX. 75380. Chromic Acid, mfg. by Atotech, Rock Hill, SC. 29731
23. No soil contamination or groundwater sampling at the property of 6837 Farmdale

Ave. See Pacific Steel Treating Co., Inc. for 6829 Farmdale Ave.

24. No groundwater wells located at the property of 6837 Farmdale Ave. As of March 2006 PM&P started leasing the property at 6829 Farmdale Ave. and observed no groundwater wells on the property.
25. Insurance policies held by PM&P provided. PM&P is submitting the current insurance policy, which covers 6837 Farmdale Ave and the newly started operations at 6829 Farmdale Ave. our investigation into prior insurance policies continues and I will supplement this response upon their discovery.
26. For 6837 Farmdale Ave., PM&P provides the City of Los Angeles wastewater discharge permit. At 6829 Farmdale Ave., PM&P began discharge in March 2006 pursuant to the City of Los Angeles wastewater discharge permit provided.
27. For 6837 Farmdale Ave., see Response to #26 for permit. Copies of discharged wastewater analysis provided. For 6829 Farmdale Ave., see Response to #26 for permit. Copies of discharged wastewater analysis provided.
28. For 6837 Farmdale Ave. and starting in March 2006 at 6829 Farmdale Ave. PM&P generates waste chromium, Mag oil and acetone.

The chromium (as trivalent chromium) is stored, treated, transported and recycled as described in Response #22.

Spent Mag oil and acetone are stored in polypropylene tanks in sealed concrete berms until lawful transport to a permitted off-site recycling facility. Mag oil and acetone are not treated or discharged to the sewer.

29. All chromium waste is reduced from hexavalent to trivalent using sodium metabisulfite as part of a batch process in a polypropylene tank. All treatment including filter press is in a epoxy sealed concrete bermed area. No chromium is allowed into the sewer. Filter cake is then manifested offsite for recycling.
30. PM&P uses a batch process in above ground polypropylene tanks. PM&P does not have any waste stream in their sumps.
31. For 6837 Farmdale Ave. and starting in March 2006 at 6829 Farmdale Ave. PM&P accumulated the following wastes before off-site disposal/recycling: chromium filter cake, Mag oil and acetone. All accumulation occurred in polypropylene tanks in epoxy sealed concrete berms.
32. No leaks, spills or other releases into the environment of any hazardous substances or pollutants or contaminants have occurred at 6837 Farmdale Ave. Since PMP began conducting business in March 2006 at 6829 Farmdale Ave., no leaks, spills or other releases have occurred.

33. With the exception of the correspondence previously identified in Response # 22, PM&P has had no correspondence between any person, business or agency regarding any releases of any kind at 6837 Farmdale Ave. PM&P has had no correspondence between any person, business or agency regarding any releases of any kind at 6829 Farmdale Ave.
34. PM&P is unable to respond for Pacific Steel Treating Co., Inc., which is a separate corporation. PM&P is separately owned and operated. Until March 2006 PM&P never operated under any business entity at 6829 Farmdale Ave. PM&P ceased to be associated with Pacific Steel Treating Co., Inc. in 1992. PM&P began leasing 6829 Farmdale Ave. in January 2003 for warehousing and in March 2006 for its inspection services.

Except as noted in this response, all of PM&P's operations from 1972-2006 have been exclusively at 6837 Farmdale Ave. and are limited to visual inspection laboratory services. As PM&P understands, Pacific Steel Treating Co., Inc. conducted heat treating activities exclusively at 6829 Farmdale Ave. According to one web site, "heat treatment" is defined as: "A combination of heating and cooling operations applied to a metal or alloy in the solid state to obtain desired conditions or properties. Heating for the sole purpose of hot working is excluded from the meaning of this definition." See <http://www.wisoven.com/heatreat.htm#heattreatment>


PM&P does not offer products. The specific services offered by PM&P include: Non-destructive visual testing of customers parts according to customer specification. A visual inspection laboratory applies certain fluorescent dyes and electrical current to parts and then under black light conditions checks for cracks, laps, seams or imperfections inherent in the part. The passivation of parts is to dip in acid tanks to remove any free iron introduced into the part.

PM&P cannot respond as to the specific kinds of products or services offered by Pacific Steel Treating Co., Inc., other than heat-treating. The specific client base of PM&P is commercial businesses that require visual testing services performed by trained technicians usually at the end of all operations performed to give final approval for the parts integrity. A final certification stating that the part has undergone this testing is required. We cannot describe the specific client base for Pacific Steel Treating Co., Inc., other than persons in need of heat-treating.

In January 2003 Pacwest Properties L.L.C. purchased 6829 Farmdale Ave. and 6837 Farmdale Ave. PM&P used 6829 Farmdale Ave. for warehouse operations beginning in January 2003 and for an inspection laboratory in March 2006.



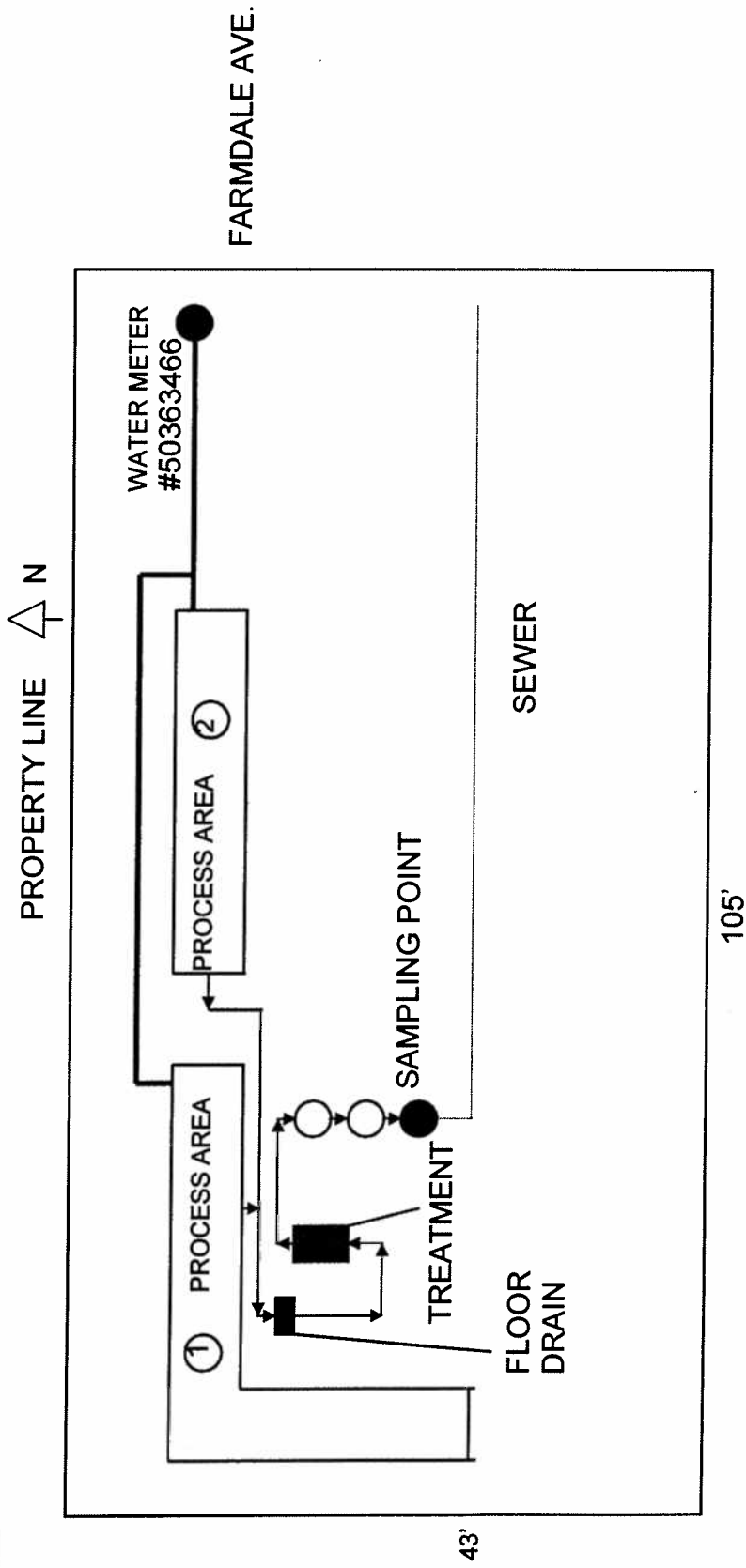
35. (1) Pacwest Properties LLC purchased 6829 Farmdale Ave. from Pacific Steel Treating Co., Inc. in February 2003. That is the only business relationship between Pacwest and Pacific Steel Treating Co., Inc.
- (2) PM&P is the only member of Pacwest Properties L.L.C. since the inception of Pacwest. in February 2001.
36. There is no chromium contamination in any form at the property of 6837 Farmdale Ave. PM&P has no such records of "chromium contamination in sludge from various clarifiers and sumps." PM&P uses small amounts of Sodium Dichromate and Chromic Acid in its passivation operations. Please refer to earlier question #22 for handling and usage of chromium. Monthly used volume includes approximately 2-3 lbs of powered chromium per month. Which in turns generates 25 gallons of 2-3% chromium containing liquid per month.
37. The three-stage clarifier is above ground. Clarifier permit from City of Los Angeles provided.
- All processes are in above ground tanks in spill-contained epoxy sealed concrete berms and polypropylene protective flooring. Spent acids are neutralized in batch tanks before entering three-stage clarifier in which all water is according to our city permit before entering the sewer. PM&P chromium chemical whether new, used or treated never enters the three-stage clarifier or sewer system. Chromium, mag oil or acetone never enters the three-stage clarifier or sewer system. All chromium, mag oil and acetone is manifested off site for recycling. Manifests included.
38. PM&P has no documentation or information. PM&P is unrelated to Pacific Steel Treating Co., Inc. Question pertains to Pacific Steel Treating Co., Inc.
39. PM&P has no documentation or information. PM&P is unrelated to Pacific Steel Treating Co., Inc. Question pertains to Pacific Steel Treating Co., Inc.

Sincerely,  
  
Erik Andersen, President  
Pacific Magnetic & Penetrant Co., Inc.

Question 19  
6837 Farmdale

- ① Process number
- Water Meter
- Sample Point
- Floor Pit
- Pretreatment System


# SITE PLAN




Site Plan  
Pacific Magnetic & Penetrant Co., Inc.  
6837 Farmdale Ave.  
North Hollywood, CA. 91605  
Drawn By : Erik B. Andersen 2/21/96  
Approved By : Erik B. Andersen 2/21/96

LEGEND:

 FLOOR DRAIN

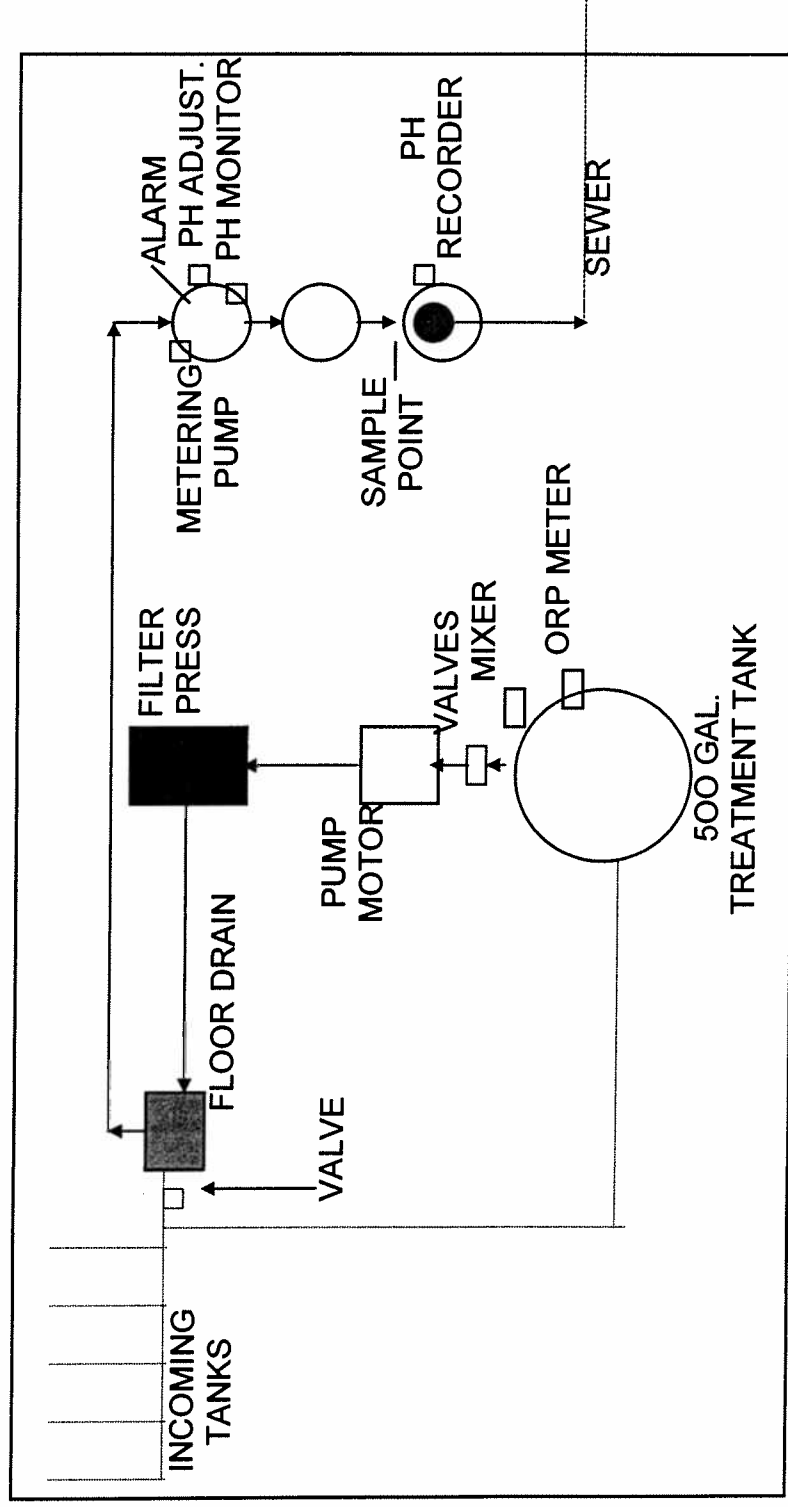
 INCOMING WATER FROM TANKS

 FILTER PRESS

 WASTEWATER LINE

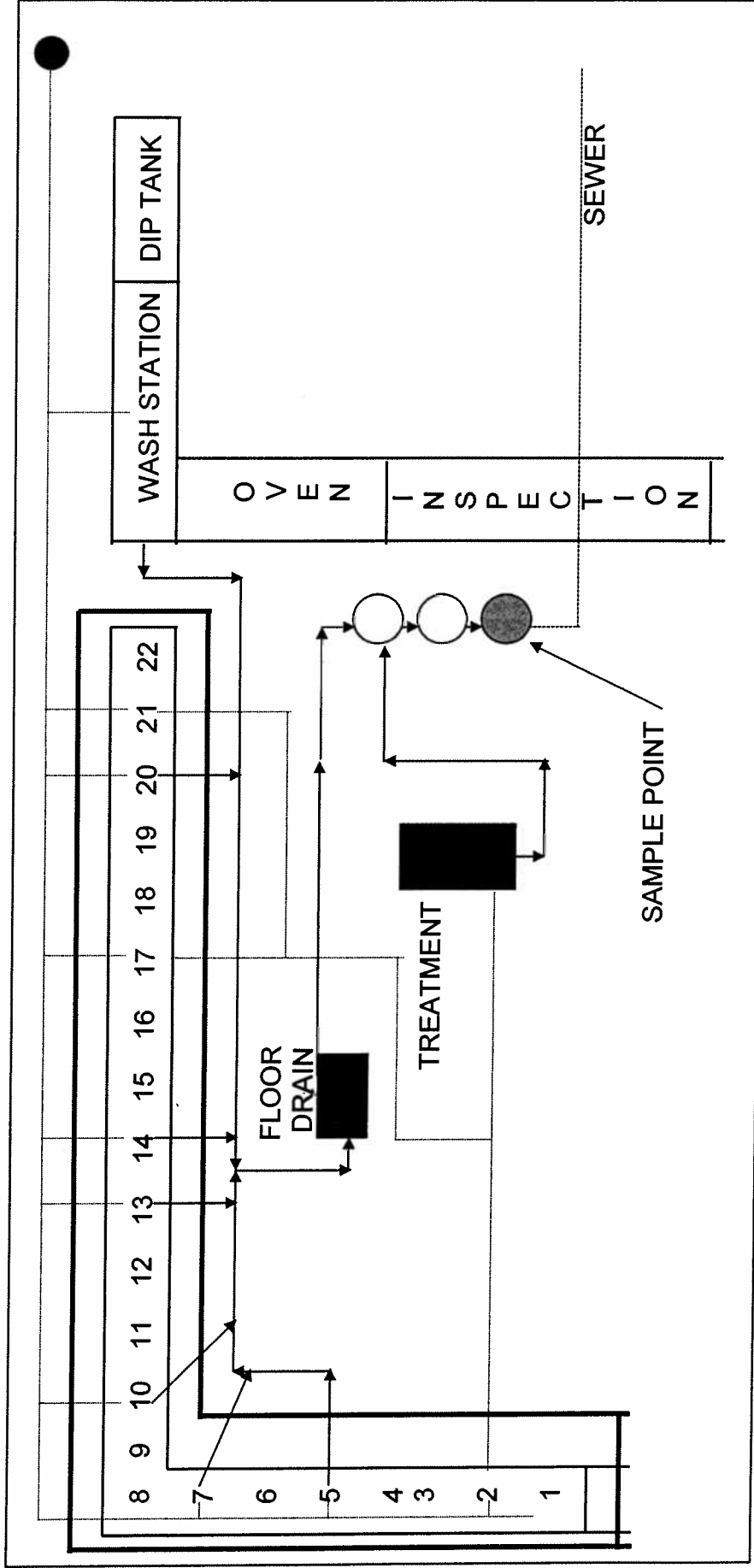
 SAMPLE POINT

 SEWER



PRETREATMENT SYSTEM

# MANUFACTURING PROCESS LAYOUT



## LEGEND:

- MAIN WATER SOURCE
- WATER SUPPLY LINE
- - - WASTEWATER LINE
- - - SEWER



MANUFACTURING PROCESS LAYOUT  
 PACIFIC MAGNETIC & PENETRANT CO.  
 6837 FARMDALE AVE. N.H. CA. 91605  
 DRAWN BY: ERIK B. ANDERSEN 3/12/96  
 APP. BY: ERIK B. ANDERSEN 3/12/96

# SITE PLAN 6829 FARMDALE AVE.

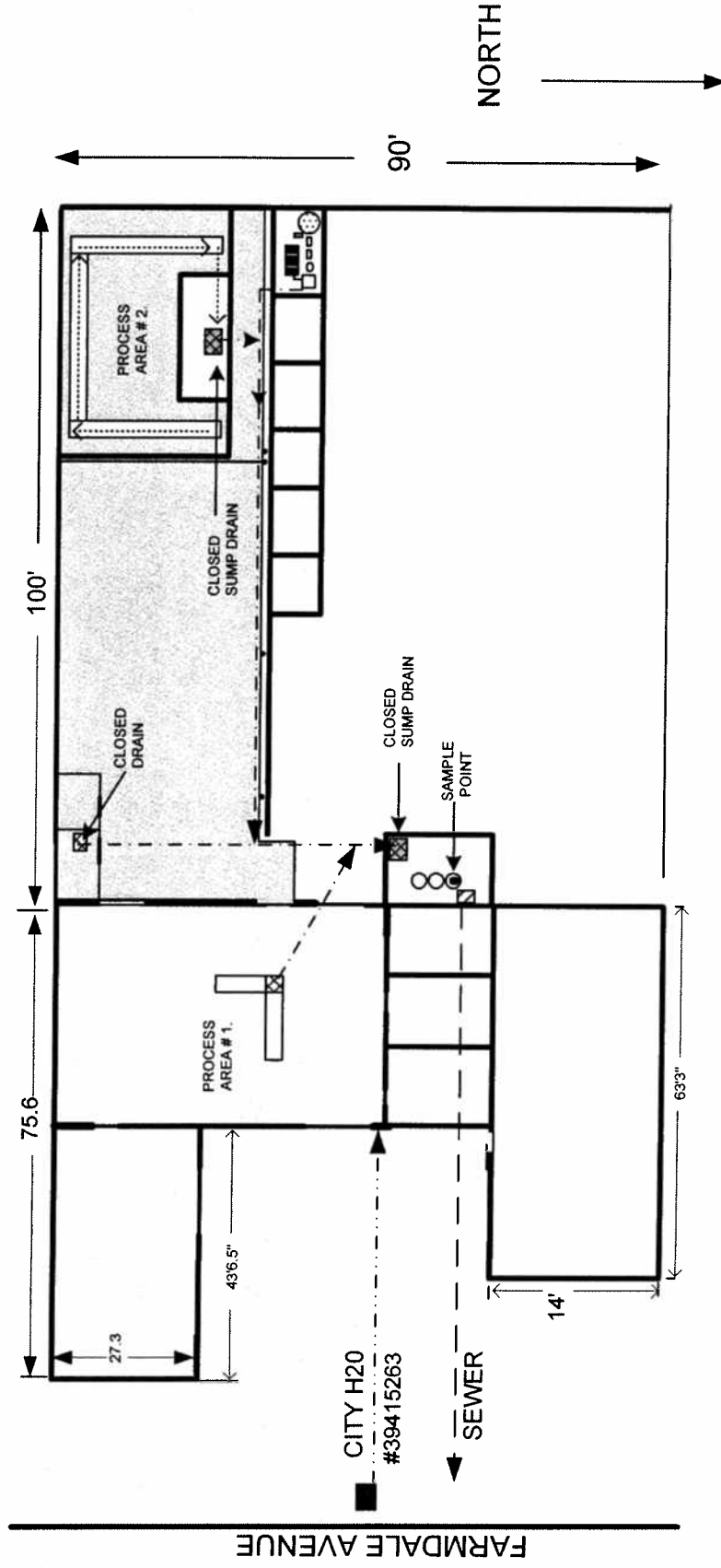
Not to scale

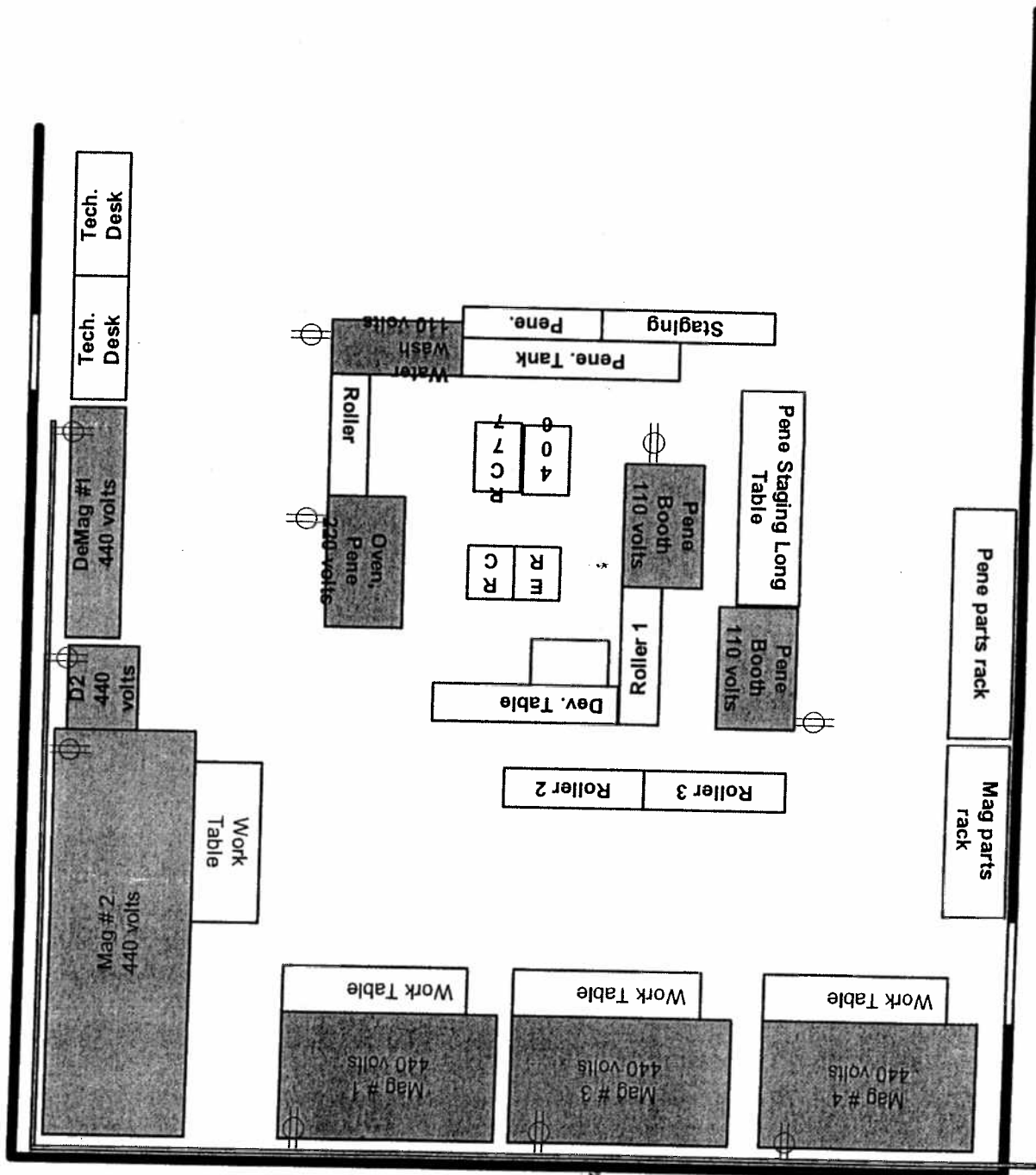
## LEGEND:

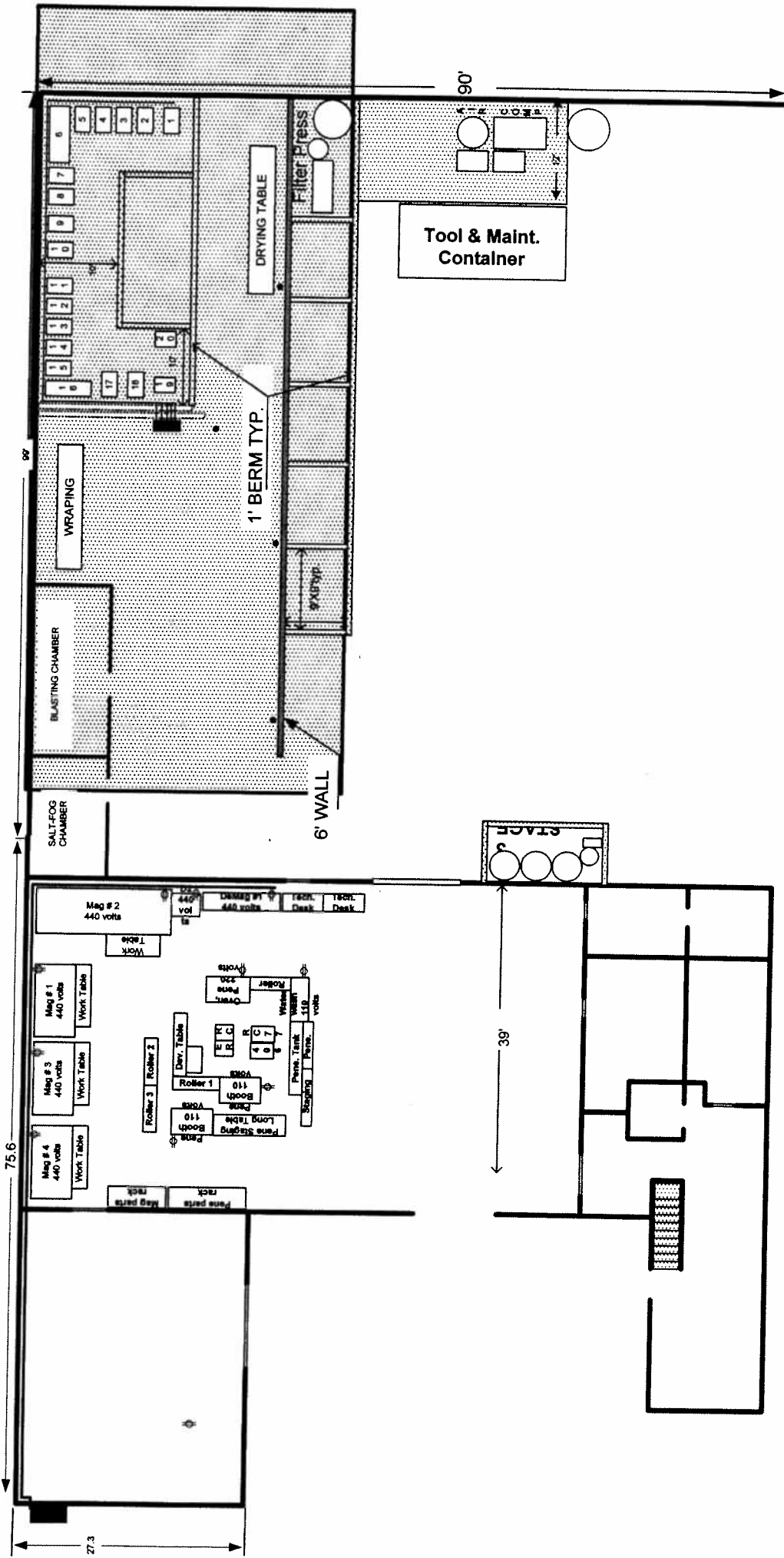
- WATER METER
- SAMPLING POINT
- ⊠ CLOSED LOOP DRAIN
- ⊞ CLOSED LOOP SUMP DRAIN
- ▣ SEWER DRAIN
- ABOVE GROUND CLARIFIER

METERED CITY WATER SUPPLY LINE  
CONTAINMENT BERM

*Question 19*  
*6829 Farmdale*









FAA Certified No. XQ2R302L

*Question 20*  
**PACIFIC MAGNETIC & PENETRANT CO., INC**

MAGNETIC AND PENETRANT INSPECTION  
PASSIVATION • GLASSBEAD • CHEMICAL ETCH



MT • PT  
CHEMICAL PROCESSING

**PMP CHEMICAL LIST**

As of 5/20/2006

PRODUCT NAME	CAS NO.	QUANTITY
1. Nitric Acid	7697-37-2	55 gallons
2. Hydrochloric Acid	7647-01-0	30 gallons
3. Hydrofluoric Acid	7664-39-3	5 gallons
4. Sodium Hydroxide	1310732	200 lbs
5. Mi-Glow	12227-89-3	5 lbs
6. Base Oil HF	8042-47-5	55 gallons
7. Turco 4215 LT	9016-45-9	600 lbs
8. Propane	F9-98-6	30 gallons
9. D9OG Developer	N/A	5 gallons
10. HM 604 Dubl-Chek Penetrant	68131-40-8	55 gallons
11. ER85 Emulsifier	64742-53-6	30 gallons
12. Magna Glow Mag Particles	01-6130-51	.45 lbs
13. Ardrex Bio Pen	4H 22643	90 oz.
14. D-100 Developer	N/A	33 oz./936 gr.
15. DP-51 Penetrant	N/A	32 oz.
16. DP - 40	N/A	1065 grams
17. DR-60 Remover	N/A	2130 grams
18. Chromic Acid	1333-82-0	40 lbs.
19. Acetone	UX-1090-P6N	55 Gal.
20. HM-406 Penetrant	3L-K34	40 Gal.
21. Ensolv	4042 6/02	5 Gal.
22. Sodium Bichromate	739112-01	30 lbs.
23. Sodium Metabisulfite	7681-57-4	100 lbs.



# Question 21

<b>MATERIAL SAFETY DATA SHEET</b>		Page 1 Issued: 26/Oct/2001	CAS No 7738-94-5
<b>Company Details</b>			
<b>Name</b>	Protea Industrial Chemicals	<b>Emergency Phone Number</b>	082-490-5011
<b>Address</b>	Killarney Ave. Killarney Gardens Milnerton, R.S.A. E Mail: evonmaltzahn@prochem.co.za	<b>Tel</b>	021-550-8100
		<b>Fax</b>	021-550-8180
<b>1.Product and Company Identification:</b>			
<u>Trade / Commercial Name</u>	CHROMIC ACID		
<u>Chemical Name</u>	Chromic acid, solid		
<u>Formula</u>	CrH2O4		
<u>Chemical Family</u>			
<u>Synonyms</u>	Chromic (VI) acid; Chromic acid (H2CrO4)		
<u>Un No</u>	1755	<u>Hazchem Code</u>	2w
<u>ERG No.</u>	154	<u>EAC</u>	47
<b>2.Composition</b>			
<u>Hazardous Components</u>	Chrome		
<b>3.Hazards Identification:</b>			
Oxidizing Agent If inhaled, could be harmful. Contact causes severe burns to skin and eyes. Fire could produce irritating or poisonous gases. Runoff from fire-control or dilution water could cause pollution.			
<b>4.First Aid Measures:</b>			
<u>First Aid Skin</u>	Immediately remove contaminated clothing, including shoes. Flush body with plenty of water for at least 15 minutes.		
<u>First Aid Eyes</u>	Flush eyes with water for 15 minutes. Hold eyelids open while washing.		
<u>First Aid Ingested</u>	Not applicable.		
<u>First Aid Inhalation</u>	IMMEDIATELY remove to fresh air.		
<b>5.Fire Fighting Measures:</b>			
SMALL FIRES: Water only, no dry chemicals, CO2 or Halon. LARGE FIRES: Flood fire area with water. Do not move cargo or vehicle if cargo has been exposed to heat. Cool containers that are exposed to flames with water from the side until well after the fire is out. Stay away from ends of tanks. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection.			
<b>6.Accidental Release Measures:</b>			
PRECAUTIONS: Restrict access to area. Provide adequate protective equipment and ventilation. Remove sources of heat and flame. Notify occupational and environmental authorities. SPILL OR LEAK: Keep combustibles (wood,paper,oil,etc) away from hazard area. Do not touch spilled material. Stop leak if you can do it without risk. Use water spray to reduce vapours. SMALL SPILLS: Flush area with flooding amounts of water. LARGE SPILLS: Dike liquid spill for later disposal			
<b>7.Handling and Storage:</b>			

Fire separation of at least 5M or 4Hr fire resistant wall from the following classes is recommended. Organic Peroxides Poison Corrosives Storage in the same room or space is prohibited with the following classes: The rooms or spaces should be at least 10M apart. Explosives Flammable Gases Poisonous Gases Flammable Liquids Flammable Solids Spontaneously Combustibles Dangerous When Wet Radioactive

#### 8.Exposure Controls/Personal Protection:

Occupation Exposure Limits No Exposure Limits Established

##### Controls

The control measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Supply sufficient replacement air to make up for air removed. Have a safety shower/eye wash fountain readily available in the immediate work area

##### Personal Protection

If engineering controls and work practices are not effective in controlling this material, then wear suitable personal protection equipment, including chemical safety goggles & face shield, boots, imperious gloves, coveralls, & respiratory protection. Have appropriate equipment available for use in emergencies.

#### 9.Physical and Chemical Properties:

Deliquescent crystals. Boiling Point of Solid: unstable at elevated temperatures. Melting Point: 196 oC  
Relative Density: 2,70 (water:1) Appreciably soluble in water. Solid or solution is reactive with oxidizable materials. Crystals are deliquescent and will attract moisture if exposed to humid air.

#### 10.Stability and Reactivity:

Conditions To Avoid

Incompatible Material

Other

#### 11.Toxicological Information:

#### 12.Ecological Information:

No ecological problems are expected when the product is handled and used with due care.

#### 13.Disposal Considerations:

##### Disposal Method Product

There are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Disposal Method Packaging Disposal in accordance with local legal provisions.

#### 14.Transport Information:

<u>UN No</u>	1755	<u>Hazchem Code</u>	2w
<u>EAC</u>	47	<u>ERG No.</u>	154
<u>IMDG Code</u>	5038	<u>IMDG-Packaging Group</u>	II
<u>Marine Pollutant</u>	yes		
<u>Class</u>	Class: 5.1 Oxidizing Agent Group: II		
<u>Subsidiary Risks</u>	Corrosive		
<u>Tremcard Number</u>	866		

**15.Regulatory Information:**EEC Hazard Classification 5.1Risk Phases

Contact with combustible material may cause fire Causes severe burns

Safety Phases

After contact with skin, was immediately with plenty of ... (to be specified by the manufacturer)

National Legislation**16:Other Information:**

Reason for Alteration: General update. The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properness of the product.

All information is given in good faith but without guarantee in respect of accuracy and no responsibility is accepted for errors or omissions or the consequences thereof

Question 21



**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



Mallinckrodt  
CHEMICALS



24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response In Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

## SODIUM DICHROMATE

### 1. Product Identification

**Synonyms:** Sodium bichromate; sodium bichromate dihydrate; chromic acid, disodium salt, dihydrate; Sodium Dichromate, Dihydrate

**CAS No.:** 10588-01-9 (Anhydrous); 7789-12-0 (Dihydrate)

**Molecular Weight:** 298.0

**Chemical Formula:** Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> 2H<sub>2</sub>O

**Product Codes:**

J.T. Baker: 3672, 3674

Mallinckrodt: 7420, 7424

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Dichromate	10588-01-9	99 - 100%	Yes

### 3. Hazards Identification

#### Emergency Overview

**DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. AFFECTS THE RESPIRATORY SYSTEM, LIVER, KIDNEYS, EYES, SKIN AND BLOOD. MAY CAUSE ALLERGIC REACTION. CANCER**

**HAZARD. CAN CAUSE CANCER.** Risk of cancer depends on duration and level of exposure.

**J.T. Baker SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

---

Health Rating: 4 - Extreme (Cancer Causing)

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;  
PROPER GLOVES

Storage Color Code: White (Corrosive)

---

### **Potential Health Effects**

---

#### **Inhalation:**

Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. May cause ulceration and perforation of the nasal septum. Symptoms may include sore throat, coughing, shortness of breath, and labored breathing. May produce pulmonary sensitization or allergic asthma. Higher exposures may cause pulmonary edema.

#### **Ingestion:**

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea. May cause violent gastroenteritis, peripheral vascular collapse, dizziness, intense thirst, muscle cramps, shock, coma, abnormal bleeding, fever, liver damage and acute renal failure.

#### **Skin Contact:**

Corrosive. Symptoms of redness, pain, and severe burn can occur. Dusts and strong solutions may cause severe irritation. Contact with broken skin may cause ulcers (chrome sores) and absorption, which may cause systemic poisoning, affecting kidney and liver functions. May cause skin sensitization.

#### **Eye Contact:**

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. May cause corneal injury or blindness.

#### **Chronic Exposure:**

Repeated or prolonged exposure can cause ulceration and perforation of the nasal septum, respiratory irritation, liver and kidney damage and ulceration of the skin. Ulcerations at first may be painless, but may penetrate to the bone producing "chrome holes." Known to be a human carcinogen.

#### **Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders, asthma, allergies or known sensitization to chromic acid or chromates may be more susceptible to the effects of this material.

---

## **4. First Aid Measures**

#### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

#### **Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

#### **Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

---

## 5. Fire Fighting Measures

**Fire:**

Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

**Explosion:**

Strong oxidants may explode when shocked, or if exposed to heat, flame, or friction. Also may act as initiation source for dust or vapor explosions.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

---

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

---

## 7. Handling and Storage

Protect against physical damage. Store in a dry location separate from combustible, organic or other readily oxidizable materials. Avoid storage on wood floors. Remove and dispose of any spilled dichromates; do not return to original containers. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

---

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

- OSHA Permissible Exposure Limit (PEL):

For chromic acid and chromates, as  $\text{CrO}_3 = 0.1 \text{ mg/m}^3$  (ceiling)

- ACGIH Threshold Limit Value (TLV):

For water-soluble  $\text{Cr(VI)}$  compounds, as  $\text{Cr} = 0.05 \text{ mg/m}^3$  (TWA), A1 - confirmed human carcinogen.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### **Eye Protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

---

## 9. Physical and Chemical Properties

### **Appearance:**

Orange-red crystals or granules.

### **Odor:**

Odorless.

### **Solubility:**

Soluble in water (73%)

### **Specific Gravity:**

2.35 @25C (77F)

### **pH:**

3.5 (1% solution) 4.0 (10% solution)

### **% Volatiles by volume @ 21C (70F):**

0

### **Boiling Point:**

400C (752F)

### **Melting Point:**

357C (675F)

### **Vapor Density (Air=1):**

10

**Vapor Pressure (mm Hg):**

0 @ 20C (68F)

**Evaporation Rate (BuAc=1):**

No information found.

---

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Burning may produce chrome oxides.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Hydrazine, acetic anhydride, ethanol, trinitrotoluene, hydroxylamine, strong acids, oxidizable materials especially in the presence of strong acid solutions. Any combustible, organic or other readily oxidizable material (paper, wood, sulfur, aluminum or plastics).

**Conditions to Avoid:**

Heat, incompatibles.

---

## 11. Toxicological Information

Oral rat LD50: 50 mg/kg. Investigated as a tumorigen, mutagen, reproductive effector.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sodium Dichromate (10588-01-9)	Yes	No	1

---

## 12. Ecological Information

**Environmental Fate:**

When released into the soil, this material may leach into groundwater. When released into water, this material is not expected to evaporate significantly. This material may bioaccumulate to some extent. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

**Environmental Toxicity:**

This material is expected to be toxic to aquatic life.

---

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations



may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

### Domestic (Land, D.O.T.)

**Proper Shipping Name:** TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S. (SODIUM DICHROMATE)

**Hazard Class:** 6.1, 8

**UN/NA:** UN3290

**Packing Group:** II

**Information reported for product/size:** 100LB

### International (Water, I.M.O.)

**Proper Shipping Name:** TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S. (SODIUM DICHROMATE)

**Hazard Class:** 6.1, 8

**UN/NA:** UN3290

**Packing Group:** II

**Information reported for product/size:** 100LB

## 15. Regulatory Information

Ingredient	TSCA	EC	Japan	Australia
Sodium Dichromate (10588-01-9)	Yes	Yes	Yes	Yes

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Sodium Dichromate (10588-01-9)	Yes	Yes	No	Yes

Ingredient	-SARA 302- RQ	TPQ	-SARA 313- List	Chemical Catg.
Sodium Dichromate (10588-01-9)	No	No	No	Chromium com

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Sodium Dichromate (10588-01-9)	10	No	No

Chemical Weapons Convention: No      TSCA 12(b): Yes      CDTA: No  
SARA 311/312: Acute: Yes      Chronic: Yes      Fire: Yes      Pressure: No  
Reactivity: No      (Pure / Solid)

### WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

**Australian Hazchem Code:** 1WE

**Poison Schedule:** S6

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

---

## 16. Other Information

**NFPA Ratings:** Health: 3 Flammability: 1 Reactivity: 1

**Label Hazard Warning:**

DANGER! CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. AFFECTS THE RESPIRATORY SYSTEM, LIVER, KIDNEYS, EYES, SKIN AND BLOOD. MAY CAUSE ALLERGIC REACTION. CANCER HAZARD. CAN CAUSE CANCER. Risk of cancer depends on duration and level of exposure.

**Label Precautions:**

Keep from contact with clothing and other combustible materials.

Do not get in eyes, on skin, or on clothing.

Do not breathe dust or mist from solutions.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Store in a tightly closed container.

Do not store near combustible materials.

**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

MSDS Section(s) changed since last revision of document include: 8.

**Disclaimer:**

\*\*\*\*\*

Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

\*\*\*\*\*

**Prepared by:** Environmental Health & Safety

Phone Number: (314) 654-1600 (U.S.A.)

*Question 27*

BRENNTAG WEST, INC. 10747 PATTERSON PLACE SANTA FE SPRINGS, CA 90670  
PHONE#... (562)903-9626 MSDS#... 24 2/14/02

PAGE 2

## MATERIAL SAFETY DATA SHEET NITRIC ACID 38 BE, 42 BE, TOWER GRADE

## EXTINGUISHING MEDIA:

USE THAT WHICH IS APPROPRIATE FOR THE SURROUNDING FIRE.

## UNUSUAL FIRE AND EXPLOSION HAZARDS:

THIS PRODUCT CAN CAUSE SPONTANEOUS IGNITION OF SOME MATERIALS. CAN REACT EXPLOSIVELY WITH METALLIC POWDERS, ALCOHOL, CHARCOAL, ORGANIC ACIDS, HYDROGEN SULFIDE AND TURPENTINE. INCREASES THE FLAMMABILITY OF COMBUSTIBLE AND OTHER ORGANIC OR READILY OXIDIZABLE MATERIALS. CONTACT OF THIS PRODUCT WITH COMMON METALS MAY GENERATE HYDROGEN GAS, WHICH CAN FORM FLAMMABLE MIXTURES WITH AIR.

## SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION 9). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME.

## Section 04 Reactivity Data

\*\*\*\*\*  
REACTIVITY:

STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.

## CONDITIONS AFFECTING REACTIVITY:

OXIDIZER. DANGEROUSLY REACTIVE WITH MANY MATERIALS. AVOID EXPOSURE TO DIRECT SUNLIGHT.

## INCOMPATIBLE MATERIALS:

CAN SUPPORT COMBUSTION AND MAY INCREASE THE FLAMMABILITY OF COMBUSTIBLE, ORGANIC AND OTHER READILY OXIDIZABLE SUBSTANCES. AVOID CONTACT WITH HYDROCARBONS, CHLORATES, SULFUR, HYDROGEN SULFIDE, CHARCOAL, FINELY DIVIDED METALS, WOOD, SAWDUST, BASE METALS AND OTHER EASILY OXIDIZED MATERIAL, AND STRONGLY ALKALINE MATERIALS WHICH MAY CAUSE VIOLENT SPLATTERING AND LIBERATE HEAT AND AMMONIA. THIS MATERIAL IS CORROSIVE TO METAL (SEE SECTION 3) AND WILL GENERATE OXIDES OF NITROGEN AND HYDROGEN GAS.

## HAZARDOUS DECOMPOSITION PRODUCTS:

NITRIC OXIDE (NO) AND NITROGEN DIOXIDE (NO2) ARE DECOMPOSITION PRODUCTS THAT ACCUMULATE UNDER NORMAL STORAGE CONDITIONS. IF INVOLVED IN A FIRE, OXIDES OF NITROGEN MAY BE GENERATED.

## HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

## POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN.

## Section 05 Spill, Leak And Disposal Procedures

\*\*\*\*\*  
HIGHWAY OR RAILWAY SPILLS\*\*\*\*\*

CALL CHEMTREC 800/424-9300 CONT. U.S.  
COLLECT 202/483-7616 FROM ALASKA & HAWAII

## PRECAUTIONS IN CASE OF RELEASE OR SPILL:

The information herein is given in good faith, but no warranty, express or implied, is made.

BRENNTAG WEST, INC. 10747 PATTERSON PLACE SANTA FE SPRINGS, CA 90670  
 PHONE#... (562)903-9626 MSDS#... 24 2/14/02 PAGE 1

# MATERIAL SAFETY DATA SHEET NITRIC ACID 38 BE, 42 BE, TOWER GRADE

## Section 01 Identification

\*\*\*\*\*

Info Furnished By..... UNOCAL CORP.  
 Address..... 1201 W. 5TH ST., LOS ANGELES, CA. 90017  
 Emergency Phone #..... 202/483-7616, 800/424-9300 (CHEMTREC)  
 Date Effective..... EFF. DATE:09/28/93, REVISED 10/23/98  
 Product or Trade Name..... NITRIC ACID 38 BE, 42 BE, TOWER GRADE  
 Chemical Family..... INORGANIC ACID  
 Chemical Name/Synonyms.... NITRIC ACID 38 BE, 42 BE, TOWER GRADE  
 HAZARDOUS INGREDIENTS CAS REGISTRATION # HAZARD DATA

	PERCENT	EXPOSURE LIMIT	UNITS	AGENCY	TYPE
NITRIC ACID (%)					
CAS# 7697-37-2	56-67	2.000	PPM	ACGIH	TWA
		4.000	PPM	ACGIH	STEL
		2.000	PPM	MSHA	TWA
		2.000	PPM	OSHA	TWA

NITRIC OXIDE					
CAS#10102-43-9	VARIES	25.000	PPM	ACGIH	TWA
		25.000	PPM	MSHA	TWA
		25.000	PPM	OSHA	TWA
		25.000	PPM	CAL OSHA	TWA

NITROGEN DIOXIDE					
CAS# 10102-44-0	VARIES	3.000	PPM	ACGIH	TWA
		5.000	PPM	ACGIH	STEL
		5.000	PPM	MSHA	CEIL
		1.000	PPM	OSHA	STEL
		3.000	PPM	CAL OSHA	TWA

## OTHER COMPONENTS:

WATER

CAS# 7732-18-5 33-44

NOT ESTABLISHED

SYNONYMS: HYDROGEN NITRATE HNO3

GENERIC NAME: NITRIC ACID

## Section 02 Physical Data

\*\*\*\*\*

Boiling Point(760 MM HG).. APPROXIMATELY 246 - 250 DEG. F.  
 % Volatile By Volume..... 100  
 Melting Point..... -6 TO 31 F  
 Vapor Density(Air=1)..... 1.5 - 1.7  
 Solubility In Water..... 100%  
 Appearance & Color..... CLEAR COLORLESS LIQUID WITH SHARP, PUNGENT ODOR  
 Specific Gravity..... 38 BE=1.355, 42 BE = 1.408  
 Evaporation Rate(Bu.Ac.=1) >1  
 APPROXIMATE BULK DENSITY (LB/GAL):38 BE = 11.3, 42 BE = 11.7

## Section 03 Fire And Explosion Hazard Data

\*\*\*\*\*

Pa. 20K  
 PMP  
 QCA  
 W-1

*Question 2*



**JONES-HAMILTON CO.**

8400 Enterprise Drive, Newark, CA 94560-3310 (510) 797-2471

**MATERIAL SAFETY DATA SHEET**

**SECTION 1 PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Hydrochloric acid, 17 to 37%

**Product Code:** HCL01

**Synonyms:** Hydrogen chloride solution, Muriatic acid

**Product Use:** Acidizing (activation) of petroleum wells, food industry, scale removal, metal cleaning, pH adjustment, industrial acidizing.

**Date of MSDS Preparation:** March 2002

**Manufacturer's Name/Address:** Jones-Hamilton Co.  
8400 Enterprise Drive  
Newark, CA 94560  
-or-  
30354 Tracy Road  
Walbridge, OH 43465

**24-Hour Emergency Phone Numbers [U.S.A.]:**  
California: (510) 797-2471  
Ohio: (419) 666-9838  
CHEMTREC: 800-424-9300  
National Response in Canada: 800-265-9426

**SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Formula:** HCl

<u>Component</u>	<u>CAS#</u>	<u>% (by weight)</u>	<u>Baumé</u>	<u>Exposure Limits</u>
Hydrogen chloride	7647-01-0	17 – 37.1	11.4 to 23°	5 ppm (7 mg/m <sup>3</sup> ) ceiling
Water	7732-18-5	62.9 – 83	---	Not Applicable

**OSHA:** This material is classified as hazardous under current OSHA regulations.

**SECTION 3 HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

Colorless to light yellow liquid that fumes in air.

Highly corrosive! Contact can cause eye burns and permanent tissue damage. Fumes corrosive to eyes and respiratory tract. Highly toxic to fish and other water organisms.

**Potential Health Effects:**

Question 27

Honeywell

# Material Safety Data Sheet

## HYDROFLUORIC ACID, AQUEOUS (70%)

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Hydrofluoric Acid, Aqueous (70%)

**OTHER/GENERIC NAMES:** Aqueous HF, Hydrofluoric Acid Solution, 70% HF

**PRODUCT USE:** Metal Pickling, Glass Etching, Chemical Derivatives

**MANUFACTURER:** Honeywell International  
Industrial Fluorines  
101 Columbia Road  
Box 1053  
Morristown, New Jersey 07962-1053

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-4:30pm EST)  
HF Technical Service Department  
800-622-5002

**IN CASE OF EMERGENCY CALL:**  
(24 Hours/Day, 7 Days/Week)  
1-800-707-4555 (Honeywell)  
For Transportation Emergencies:  
1-800-424-9300 (CHEMTREC for US)  
1-613-996-6666 (CANUTEC for Canada)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Hydrofluoric Acid	7664-39-3	70
Water	7732-18-5	30

Trace impurities and additional material names not listed above may also appear in the Regulatory Information Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Clear, colorless, corrosive fuming liquid with an extremely acrid odor. Forms dense white vapor clouds if released. Both liquid and vapor can cause severe burns to all parts of the body. Specialized medical treatment is required for all exposures.

## **MATERIAL SAFETY DATA SHEET**

### **Hydrofluoric Acid, Aqueous (70%)**

#### **POTENTIAL HEALTH HAZARDS**

**SKIN:** Both liquid and vapor can cause severe burns, which may not be immediately painful or visible. HF will penetrate skin and attack underlying tissues and bone. Large burns (totaling over 25 square inches of body surface area) may also cause hypocalcemia (depletion of calcium in the body) and other toxic effects which may be fatal. Solutions as dilute as 2% may cause burns with prolonged contact.

**EYES:** Both liquid and vapor can cause irritation or corneal burns. Solutions as dilute as 2% may cause burns.

**INHALATION:** **Mild exposure:** Can irritate nose, throat and respiratory system. Onset of symptoms may be delayed for several hours.

**Severe exposure:** Can cause nose and throat burns, lung inflammation and pulmonary edema (fluid in the lungs). Also results in other toxic effects including hypocalcemia (depletion of calcium in the body) which if not properly treated can result in death.

**INGESTION:** Can cause severe mouth, throat and stomach burns and may be fatal if swallowed. Even with small amounts of dilute solutions, profound and possibly fatal hypocalcemia (depletion of calcium in body) and systematic toxicity is likely to occur unless medical treatment is promptly initiated.

**DELAYED EFFECTS:** The effects of contact with dilute solutions of hydrofluoric acid or its vapors may be delayed. The potential delay in clinical signs or symptoms for dilute solutions is given below:

<u>HF Concentration</u>	<u>Delay in Symptoms</u>
> 50%	Immediately Apparent
20%-50%	1-8 hours
0%-20%	Up to 24 hours

Can also cause bone and joint changes in humans (Fluorosis).

**Carcinogenicity:** Hydrofluoric Acid is not listed by NTP, IARC, OSHA or ACGIH as a carcinogen.

#### **4. FIRST AID MEASURES**

**SKIN:** Remove the victim from the contaminated area and immediately wash the burned area with plenty of water for a minimum of 15 minutes. Limit washing to 5 minutes if definitive medical treatment is available. Remove all contaminated clothing while washing continuously. After thorough washing for at least 5 minutes, the burned area should be immersed in a solution of 0.13% iced aqueous Zephiran® Chloride until pain is relieved. As an alternate first aid treatment, 2.5% calcium gluconate gel may be continuously massaged into the burn area until the pain is relieved. For larger burns or burns treated with calcium gluconate gel (in which pain is present longer than 30 minutes), a physician should inject 5% aqueous calcium gluconate beneath, around and in the burned area. Use of local anesthetics is not recommended, as reduction in pain is an indicator of effectiveness of treatment.



## MATERIAL SAFETY DATA SHEET

### Hydrofluoric Acid, Aqueous (70%)

**EYES:** Irrigate eyes for at least 15 minutes with copious quantities of water, keeping eyelids apart and away from eyeballs during irrigation. Get competent medical attention immediately, preferably an eye specialist. If a physician is not immediately available, apply one or two drops of 0.5% Pontocaine® Hydrochloride solution followed by a second irrigation for 15 minutes. Do not use the solution described for skin treatment. Use no oils or greases unless instructed to do so by a physician. Irrigate with 1% calcium gluconate in normal saline for 1 to 2 hours to prevent or lessen corneal damage.

**INHALATION:** Move to fresh air. Keep the victim lying down, quiet and warm. Get competent medical attention immediately. If breathing has stopped, start artificial respiration at once. An authorized person should administer oxygen to a victim who is having difficulty breathing, until the victim is able to breathe easily by himself. Do not give stimulants unless instructed to do so by a physician. Victim should be examined by a physician and held under observation for at least 24 hours. Calcium Gluconate, 2.5% in normal saline may be given by nebulizer with oxygen.

**INGESTION:** Drink large amounts of water to dilute. Do not induce vomiting. Several glasses of milk or several ounces of milk of magnesia may be given for their soothing effect. Take victim to a doctor.

**ADVICE TO PHYSICIAN:** For burns of large skin areas (greater than 25 square inches), for ingestion and for significant inhalation exposure, severe systemic effects may occur. Monitor and correct for hypocalcemia, cardiac arrhythmias, hypomagnesemia and hyperkalemia. In some cases renal dialysis may be indicated. For certain burns, especially of the digits, use of intra-arterial calcium gluconate may be indicated. For inhalation exposures, treat as chemical pneumonia. Monitor for hypocalcemia. 2.5% calcium gluconate in normal saline by nebulizer or by IPPB with 100% oxygen may decrease pulmonary damage. Bronchodilators may also be administered.

## 5. FIRE FIGHTING MEASURES

### FLAMMABLE PROPERTIES

**FLASH POINT:** Not flammable  
**FLASH POINT METHOD:** Closed cup  
**AUTOIGNITION TEMPERATURE:** Not applicable  
**UPPER FLAME LIMIT (volume % in air):** Not applicable  
**LOWER FLAME LIMIT (volume % in air):** Not applicable  
**FLAME PROPAGATION RATE (solids):** Not applicable  
**OSHA FLAMMABILITY CLASS:** Not applicable

### **EXTINGUISHING MEDIA:**

Use water or suitable agent for fires adjacent to non-leaking tanks or containers of HF. Do not use solid water streams near ruptured tanks or spills of HF. Acid reacts with water and can splatter acid onto personnel.

### **UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Reaction with certain metals generates flammable and potentially explosive hydrogen gas. Considerable heat is evolved when contacted with many substances. Heat increases pressure and may explode container. Will react violently with water.

### **SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Wear self-contained breathing apparatus approved by NIOSH and full chemical protective clothing. Use water

Question 24

#. 902241  
LYNCH CORPORATION 3270 E. WASHINGTON BLVD. LOS ANGELES, CA 90023  
E#... (213)269-0191 MSDS#... 5022 12/17/97 PAGE 1

MATERIAL SAFETY DATA SHEET

UNION CARBIDE CHEMICALS & PLASTICS CO., INC.  
39 OLD RIDGEBURY ROAD, DANBURY, CT. 06817-0001  
1/800-UCC-HELP, 304/744-3487, 800/424-9300 CHEMTREC  
EFFECTIVE DATE: 08/05/93, DATE ENTERED: 06/09/94

ACETONE

KETONES

ACETONE

HAZARDOUS INGREDIENTS

CAS REGISTRATION #

APPROX. 100% ACETONE

67-64-1

30 PPM MAX. BENZENE

71-43-2

HAZARD DATA  
EXPOSURE LIMIT  
750 PPM TWA,  
OSHA & ACGIH  
1000 PPM STEL  
OSHA & ACGIH  
1 PPM TWA, OSHA  
5 PPM STEL, OSHA  
10 PPM TWA, ACGIH  
25 PPM CEILING, UCC

FORMULA: CH<sub>3</sub>COCH<sub>3</sub>

MOLECULAR WEIGHT: 58.08

SYNONYMS: DIMETHYL KETONE, 2-PROPANONE, DIMETHYL KETAL

CAS# AND NAME: 67-64-1

2-PROPANONE

CHEMICAL NAME: ACETONE

56.29C 133.32F

184 MMHG

2.0

BY WEIGHT: COMPLETE AT 20 C

TRANSPARENT COLORLESS

(H<sub>2</sub>O=1): 0.7915 AT 20/20 C

14.4

FREEZING POINT..... -96.54 C (-141.77 F)

ODOR..... MINT

PHYSICAL STATE..... LIQUID

% VOLATILES (BY WEIGHT):... 100

O F (-18 C), TAG CLOSED CUP ASTM D 56

FLAMMABLE LIMITS IN AIR (% BY VOLUME):

LOWER: 2.15

UPPER: 13.0

EXTINGUISHING MEDIA:

APPLY ALCOHOL-TYPE OR ALL-PURPOSE-TYPE FOAM BY MANUFACTURER'S RECOMMENDED  
TECHNIQUES FOR LARGE FIRES. USE CARBON DIOXIDE OR DRY CHEMICAL MEDIA FOR  
SMALL FIRES.

SPECIAL FIRE-FIGHTING PROCEDURES:

USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS AND STRUCTURES.

USE REMOTE SPRAY MONITORS OR FIGHT FIRE FROM BEHIND SHIELDS.

USE WATER SPRAY TO DISPERSE VAPORS; RE-IGNITION IS POSSIBLE.

USE SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

VAPORS FORM FROM THIS PRODUCT AND MAY TRAVEL OR BE MOVED BY AIR CURRENTS

AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SMOKING, SPARKS, HEATERS,

ELECTRICAL EQUIPMENT, STATIC DISCHARGES OR OTHER IGNITION SOURCES AT

LOCATIONS DISTANT FROM PRODUCT HANDLING POINT.

VAPORS FROM THIS MATERIAL MAY SETTLE IN LOW OR CONFINED AREAS OR TRAVEL

A LONG DISTANCE TO AN IGNITION SOURCE AND FLASH BACK EXPLOSIVELY. THIS

MATERIAL MAY PRODUCE A FLOATING FIRE HAZARD.

The information herein is given in good faith, but no warranty, express or  
implied, is made.

Question 22



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
101 Centre Plaza Drive  
Monterey Park, CA 91754-2156

March 26, 1998

PACIFIC MAGNETIC & PENETRATE  
6829 FARMDALE AVE.  
N. HOLLYWOOD, CA 91605-  
File Number: 111.2505

RE: SAN FERNANDO VALLEY SUPERFUND AREAS U.S. EPA AND LARWQCB  
NOTIFICATION OF NO FURTHER ACTION

For property located at: 6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CA 91605-

Dear Owner/Operator,


The California Regional Water Quality Control Board, Los Angeles Region ("Regional Board") staff has conducted an assessment of your facility to determine the extent of solvent usage and to assess past and current chemical handling, storage and disposal practices. Your company is among those in the San Fernando Valley which have received the Regional Board's "No Further Action" letters based on one or more of the following categories: 1) information provided in your pre-inspection questionnaire disclosed little or no solvent use; 2) the results of a staff inspection disclosed little or no solvent use; or 3) completed assessment work indicated insignificant or no solvent contamination in soil.

The purpose of this letter is to inform you that, based on the information provided to U.S. EPA by the Regional Board to date, you will not be asked by the U.S. EPA or the Regional Board to participate in regional groundwater cleanup projects currently planned for San Fernando Valley. Your company is no longer part of the U.S. EPA Superfund process, and the Regional Board and U.S. EPA plan no further action concerning your facility.

You may be contacted by those potentially responsible parties ("PRPs") that have been asked to participate in the groundwater cleanup efforts. In the event you are contacted by PRPs, please feel free to contact the appropriate Regional Board or U. S. EPA staff for additional information or assistance. The telephone numbers of Regional Board and U. S. EPA staff are provided on the enclosed contact list.

Sincerely,



 Keith A. Takata  
Director  
Superfund Division  
U. S. EPA, Region 9



Dennis A. Dickerson  
Executive Officer  
California Regional Water Quality  
Control Board, Los Angeles Region

Enclosure

**Los Angeles-Regional Water Quality Control Board  
and  
U. S. Environmental Protection Agency  
Staff Contact List**

**Regional Board Contacts:**

- For all areas ..... Eric Nupen  
(213) 266-7531
- For general questions ..... Hank Yacoub  
(213) 266-7522

**U. S. EPA Contact**

- For Glendale area ..... Duane G. James  
(415) 744-2253
- For Burbank area ..... Diane Strassmaier  
(415) 744-2157
- For No. Hollywood area ..... Lance Richman  
(415) 744-2249

**Legal concerns should be address to ..... Marie Rongone  
(415) 744-1313  
Office of Regional Counsel  
U.S. EPA**



**Cal/EPA**

**Los Angeles  
Regional Water  
Quality Control  
Board**

101 Centre Plaza Drive  
Monterey Park, CA  
91754-2156  
(213) 266-7500  
FAX (213) 266-7600

Question 22



Pete Wilson  
Governor

November 5, 1997

Erik B. Andersen, President  
Pacific Magnetic and Penetrant Co., Inc.  
6837 Farmdale Avenue  
North Hollywood, CA 91605

NO FURTHER REQUIREMENTS - PACIFIC MAGNETIC AND PENETRANT CO.,  
INC., 6837 FARMDALE AVENUE, NORTH HOLLYWOOD (FILE NO.  
111.2505)

According to our records, the subject facility has been occupied by a metal parts inspection business for more than ten years. During our inspections on January 23, 1991, and November 4, 1997, Board staff noted potential sources of liquid wastes including storage and process areas where acids, acetone and oil were used. The facility was observed to be clean and well maintained and no evidence of spillage was noted. Based on our inspections and information submitted, we have no further requirements with respect to the Well Investigation Program.

Please contact the undersigned at (213)266-7531 if you have any questions.

ERIC NUPEN, R.G.  
Senior Engineering Geologist

cc: Lance Richman, USEPA Region IX, San Francisco  
Mel Blevins, ULARA Watermaster



Question 25  
**Property Insurance**

**Declarations**

**Chubb Group of Insurance Companies**  
**15 Mountain View Road**  
**Warren, NJ 07059**

*Named Insured and Mailing Address*

PACIFIC MAGNETIC & PENETRANT CO., INC.  
6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CA 91605

*Policy Number* 3535-37-17 WUC

*Effective Date* NOVEMBER 1, 2005

*Issued by the stock insurance company indicated below, herein called the company.*

**FEDERAL INSURANCE  
COMPANY**

*Producer No.* 0010092

*Incorporated under the laws of*  
**INDIANA**

*Producer* INDUSTRIAL RISK AND INSURANCE SERVICES, INC.  
1611 E 17TH STREET  
SANTA ANA, CA 92705-0000

---

**Policy Period**

*From:* NOVEMBER 1, 2005      *To:* NOVEMBER 1, 2006  
12:01 A.M. standard time at the Named Insured's mailing address shown above.

---

**Deductible**      **\$ 5,000**

The deductible shown above applies to all coverages, except Business Income and Extra Expense, and all premises shown in this and all other property declarations, unless a specific deductible is shown following a coverage.

---

The following displays the coverages provided at the premises stated below:

**Premises Coverages**

**Premises Coverages - Blanket Limits**

BLANKET LIMIT OF INSURANCE	\$ 544,384
AUTOMATIC INCREASE IN LIMITS	4%

**COVERAGES**

PERSONAL PROPERTY

**PREMISES #1**      6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

---

**Premises Coverages**

(continued)

**PREMISES #2**                      6837 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

---

BLANKET LIMIT OF INSURANCE	\$ 300,000
COINSURANCE	50%
WAITING PERIOD	24 HOURS
EXTENDED PERIOD NUMBER OF DAYS	UNLIMITED

**COVERAGES**

BUSINESS INCOME WITH EXTRA EXPENSE

**PREMISES #1**                      6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

**PREMISES #2**                      6837 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

---

BLANKET LIMIT OF INSURANCE	\$ 120,000
DEDUCTIBLE	\$ 1,000
AUTOMATIC INCREASE IN LIMITS	4%

**COVERAGES**

EDP PROPERTY

**PREMISES #1**                      6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

**PREMISES #2**                      6837 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

---

BLANKET LIMIT OF INSURANCE	\$ 824,445
AUTOMATIC INCREASE IN LIMITS	4%

**COVERAGES**

BUILDING

**PREMISES #1**                      6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

**PREMISES #2**                      6837 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

---

**Additional Coverages**

IN TRANSIT





## Property Insurance

---

### Declarations

Effective Date            NOVEMBER 1, 2005

Policy Number            3535-37-17 WUC

---

### Additional Coverages (continued)

#### FINE ARTS

LIMIT OF INSURANCE	\$ 50,000
DEDUCTIBLE	\$ 1,000

#### PERSONAL PROPERTY

LIMIT OF INSURANCE	\$ 20,000
DEDUCTIBLE	\$ 1,000

---

**Property Coverages****Limit Of Insurance****IN TRANSIT**

ACCOUNTS RECEIVABLE	\$ 15,000
BUILDING COMPONENTS	\$ 15,000
ELECTRONIC DATA PROCESSING PROPERTY	\$ 50,000
FINE ARTS	\$ 15,000
PERSONAL PROPERTY	\$ 15,000
VALUABLE PAPERS	\$ 15,000

LOSS OF MASTER KEY	\$ 15,000
--------------------	-----------

LOSS PREVENTION EXPENSES	\$ 10,000
--------------------------	-----------

MOBILE COMMUNICATION PROPERTY	\$ 5,000
-------------------------------	----------

**MONEY & SECURITIES**

ON PREMISES	\$ 15,000
OFF PREMISES	\$ 10,000

POLLUTANT CLEAN-UP OR REMOVAL	\$ 25,000
-------------------------------	-----------

PROCESSING WATER	\$ 10,000
------------------	-----------

PREPARATION OF LOSS FEES	\$ 10,000
--------------------------	-----------

---

The following displays the Coverages and the applicable Limits Of Insurance for:

**Newly Acquired Premises Or Newly Acquired Or  
Constructed Property****Limit Of Insurance**

BUILDING	\$ 1,000,000
PERSONAL PROPERTY	\$ 500,000
PERSONAL PROPERTY AT EXISTING PREMISES	\$ 100,000
ELECTRONIC DATA PROCESSING EQUIPMENT	\$ 250,000
ELECTRONIC DATA	\$ 50,000
COMMUNICATION PROPERTY	\$ 50,000
FINE ARTS	\$ 15,000



## Property Insurance

### Schedule of Mortgagees And Loss Payees

**Chubb Group of Insurance Companies**  
15 Mountain View Road  
Warren, NJ 07059

*Named Insured and Mailing Address*

PACIFIC MAGNETIC & PENETRANT CO., INC.  
6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CA 91605

*Policy Number* 3535-37-17 WUC

*Effective Date* NOVEMBER 1, 2005

*Issued by the stock insurance company  
indicated below, herein called the company.*

**FEDERAL INSURANCE  
COMPANY**

*Producer No.* 0010092

*Incorporated under the laws of  
INDIANA*

*Producer* INDUSTRIAL RISK AND INSURANCE SERVICES, INC.  
1611 E 17TH STREET  
SANTA ANA, CA 92705-0000

### Policy Period

From: NOVEMBER 1, 2005 To: NOVEMBER 1, 2006  
12:01 A.M. standard time at the Named Insured's mailing address shown above.

### SCHEDULE

**PREMISES # 1** 6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

**MORTGAGEE:** LARS E. BRUUN-ANDERSEN, TRUSTEE OF THE NEILS  
BRUUN-ANDERSEN TRUST DATED 11-1-90

**FX-6 Personal Privacy**

**PREMISES # 2** 6837 FARMDALE AVE.  
NORTH HOLLYWOOD, CALIFORNIA 91605

**MORTGAGEE:** LARS E. BRUUN-ANDERSEN, TRUSTEE OF THE NEILS  
BRUUN-ANDERSEN TRUST DATED 11-1-90

**FX-6 Personal Privacy**



## Property Insurance

### Supplementary Declarations — Property

**Chubb Group of Insurance Companies**  
15 Mountain View Road  
Warren, NJ 07059

*Named Insured and Mailing Address*

PACIFIC MAGNETIC & PENETRANT CO., INC.  
6829 FARMDALE AVE.  
NORTH HOLLYWOOD, CA 91605

*Policy Number* 3535-37-17 WUC

*Effective Date* NOVEMBER 1, 2005

*Issued by the stock insurance company indicated below, herein called the company.*

**FEDERAL INSURANCE  
COMPANY**

*Producer No.* 0010092

*Incorporated under the laws of*  
INDIANA

*Producer* INDUSTRIAL RISK AND INSURANCE SERVICES, INC.  
1611 E 17TH STREET  
SANTA ANA, CA 92705-0000

---

### Policy Period

From: NOVEMBER 1, 2005 To: NOVEMBER 1, 2006  
12:01 A.M. standard time at the Named Insured's mailing address shown above.

---

### Covered Premises \$250,000 Blanket Limit Of Insurance

The Blanket Limit Of Insurance shown above applies only for the Premises Coverages shown below. Unless otherwise stated, this Blanket Limit Of Insurance applies separately at each covered premises shown in the Declarations. This Blanket Limit Of Insurance applies in excess of the applicable deductible shown in the Declarations.

At time of loss, the first Named Insured may elect to apportion this Blanket Limit Of Insurance to one or any combination of the Premises Coverages shown, but under no circumstance will the aggregate apportionment be permitted to exceed the Blanket Limit Of Insurance shown above at any one covered premises. For the purpose of the application of this \$250,000 Blanket Limit Of Insurance, all property at one premises shall constitute a single premises.

Separate specific Limits Of Insurance may be purchased for each of these Premises Coverages. If purchased, these Limits Of Insurance and any applicable deductible will be shown in the Declarations with the Premises Coverages. If no deductible is shown in the Declarations with the Premises Coverages, then the Property Deductible will apply. When a specific Limit Of Insurance is purchased for any of these Premises Coverages, such specific Limit Of Insurance will apply in addition to whatever amount the first Named Insured apportions to that coverage at time of loss as provided in the previous paragraphs.

---

**Coverages Included In The Blanket Limit Of Insurance:**

ACCOUNTS RECEIVABLE	LEASEHOLD INTEREST - UNDAMAGED
ELECTRONIC DATA PROCESSING PROPERTY	TENANT'S IMPROVEMENTS & BETTERMENTS
FINE ARTS	NON - OWNED DETACHED TRAILERS
LEASEHOLD INTEREST -	OUTDOOR TREES, SHRUBS, PLANTS OR LAWNS
BONUS PAYMENT,	PAIR AND SET
PREPAID RENT,	PERSONAL PROPERTY OF EMPLOYEES
SUBLEASE PROFIT,	PUBLIC SAFETY SERVICE CHARGES
TENANTS' LEASE INTEREST	RESEARCH AND DEVELOPMENT PROPERTY
	VALUABLE PAPERS

---

**Property Coverages**

The Limits Of Insurance shown below:

- are provided for the Premises Coverages and Additional Coverages shown at no additional cost to you; and
- apply separately at each premises shown in the Declarations, except for the following Additional Coverages which apply anywhere within the Coverage Territory:
  - Any Other Location;
  - Deferred Payments;
  - Exhibition, Fair Or Trade Show;
  - Installation; or
  - In Transit.

The Limits Of Insurance for:

- Debris Removal; and
- Preparation Of Loss Fees,

apply separately at each premises shown in the Declarations or anywhere within the Coverage Territory.

You may purchase increased Limits Of Insurance, and we will charge you an additional premium. If you purchase increased Limits Of Insurance for any of these coverages, the Limits Of Insurance shown in the Declarations will reflect your total Limit Of Insurance, including the Limits Of Insurance shown below. Any applicable deductible will be shown in the Declarations with the coverage. If no deductible is shown in the Declarations with the coverage, then the Property Deductible will apply. Extra Expense Coverage is not subject to any deductible.

Increased Limits Of Insurance cannot be purchased for Impairment of Computer Services – Malicious Programming – Outside Attack.

Extra expense is subject to the:

- Business Income With Extra Expense contract if purchased; or
- Extra Expense contract, if the Business Income With Extra Expense contract is not purchased.



## Property Insurance

### Supplementary Declarations — Property

Effective Date            NOVEMBER 1, 2005

Policy Number            3535-37-17 WUC

---

#### Property Coverages

#### Limit Of Insurance

##### ANY OTHER LOCATION

ACCOUNTS RECEIVABLE	\$ 15,000
BUILDING COMPONENTS	\$ 15,000
ELECTRONIC DATA PROCESSING PROPERTY	\$ 50,000
FINE ARTS	\$ 15,000
PERSONAL PROPERTY	\$ 15,000
RESEARCH AND DEVELOPMENT PROPERTY	\$ 15,000
VALUABLE PAPERS	\$ 15,000

##### DEBRIS REMOVAL

PREMISES SHOWN IN THE DECLARATIONS	\$ 100,000
ANY OTHER LOCATION	\$ 25,000
IN TRANSIT	\$ 25,000

DEFERRED PAYMENTS	\$ 25,000
-------------------	-----------

##### EXHIBITION, FAIR OR TRADE SHOW

ELECTRONIC DATA PROCESSING PROPERTY	\$ 15,000
FINE ARTS	\$ 15,000
PERSONAL PROPERTY	\$ 15,000

EXTRA EXPENSE	\$ 100,000
---------------	------------

FUNGUS CLEAN-UP OR REMOVAL	\$ 25,000
----------------------------	-----------

##### IMPAIRMENT OF COMPUTER SERVICES - MALICIOUS PROGRAMMING

INSIDE ATTACK	\$ 100,000
OUTSIDE ATTACK - PER OCCURRENCE	\$ 10,000
OUTSIDE ATTACK - ANNUAL AGGREGATE	\$ 50,000

##### INSTALLATION

ANY JOB SITE	\$ 25,000
IN TRANSIT	\$ 25,000

*Question 26*  
**CITY OF LOS ANGELES**

DEPARTMENT OF PUBLIC WORKS  
BUREAU OF SANITATION



INDUSTRIAL WASTE MANAGEMENT DIVISION  
2714 MEDIA CENTER DRIVE  
LOS ANGELES, CA 90065  
(323) 342-6200

## INDUSTRIAL WASTEWATER PERMIT

INDUSTRIAL USER NO: IU006770  
PERMIT NO: W-407316  
EFFECTIVE DATE: 07/01/2005  
AMENDED DATE: NA  
EXPIRATION DATE: 06/30/2008

LEGAL BUSINESS NAME: PACIFIC MAGNETIC & PENETRANT CO., INC.  
DOING BUSINESS AS: PACIFIC MAGNETIC & PENETRANT CO., INC.  
MAILING ADDRESS: 6837 FARMDALE Avenue  
NORTH HOLLYWOOD, CA 91605  
LOCATION ADDRESS: 6837 FARMDALE Avenue  
NORTH HOLLYWOOD, CA 91605  
CATEGORY: 413 Electroplating  
SUBPARTS: E EXISTING SOURCE FLOW < 10,000  
POINT OF DISCHARGE: Public Sewer

In accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, the above identified industrial user is hereby authorized to discharge industrial wastewater through the approved point of discharge identified herein in accordance with the discharge limitations, conditions, and requirements set forth in this permit and the L.A.M.C. Compliance with this permit does not relieve the industrial user of its obligation to comply with all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such laws, regulations, standards or requirements that may become effective during the term of this permit.

The industrial user must comply with the provisions of L.A.M.C. Section 64.30 and all terms and conditions of this permit. Noncompliance with the terms and conditions of this permit shall constitute a violation of the L.A.M.C. Section 64.30 and may subject the industrial user to administrative actions or other legal proceedings. This permit becomes void upon any change of ownership or location whatsoever.

Rita L. Robinson, Director  
Bureau of Sanitation

BY: *[Signature]*



*Question 27*

**ANACHEM**  
LABORATORIES

**TEST REPORT**

Established 1984

140 Standard Street • El Segundo, California 90245.3832 • voice 310.322.4993 • fax 310.322.668

*Waste water Analysis**Mailed 1/10/06*  
*Remailed 2/17/06*

PACIFIC MAGNETIC & PENETRANT  
6829 Farmdale Ave.  
No. Hollywood, CA 91605

ATTN: Erick Anderson

DATE January 5, 2006  
LAB NO. B13938 pg.2 of 2  
CUST P.O. VERBAL/E.J.  
SAMPLE (S) WASTE WATER  
RECEIVED 12-28-05  
SAMPLE NO. 91248 -#1,#2,#3,#4,#5  
E.L.A.P. CERTIFICATE NO. 1164  
PRENOTIFICATION DATE :12-21-05

PERMIT NO: # W-407316

DISCHARGE ADDRESS: 6837 Farmdale Avenue, North Hollywood, CA 91605

SAMPLE: GRAB SAMPLE FROM SAMPLE BOX

SAMPLED: BY JOSE BOLANOS OF ANACHEM LABORATORIES  
ON 12-28-05 AT 12:10 P.M.

CONSTITUENT	CONCENTRATION	METHOD EPA 600	DETECTION LIMIT
pH	7.0 units	150.1	2-13 units
Cyanide, Total (#1)	< 0.020 mg/L	335.2	0.02 mg/L
Cyanide, Amenable (#1)	< 0.020 mg/L	335.1	0.02 mg/L
Sulfide, Dissolved (#2)	< 0.040 mg/L	376.2	0.04 mg/L
Oil and Grease (#3)	42.5 mg/L	413.1	2 mg/L
Bis(2-Ethylhexyl)phthalate (#4)	< 0.010 mg/L	625	0.010 mg/L
Di-n-octyl phthalate (#4)	< 0.010 mg/L	625	0.010 mg/L
Hexachlorobutadiene (#4)	< 0.010 mg/L	625	0.010 mg/L
Naphthalene (#4)	< 0.010 mg/L	625	0.010 mg/L
Orthdichlorobenzene (#4)	< 0.010 mg/L	625	0.010 mg/L





## TEST REPORT

Established 19

140 Standard Street • El Segundo, California 90245.3832 • voice 310.322.4993 • fax 310.322.6681

PACIFIC MAGNETIC & PENETRANT  
6829 Farmdale Ave.  
No. Hollywood, CA 91605

ATTN: Erick Anderson

DATE January 5, 2006  
LAB NO. B13938 pg.1 of 2  
CUST P.O. VERBAL/E.J.  
SAMPLE (S) WASTE WATER  
RECEIVED 12-28-05  
SAMPLE NO. 91248-4,-5

E.L.A.P. CERTIFICATE NO. 1164  
PRENOTIFICATION DATE :12-21-05

PERMIT NO: # W-407316

DISCHARGE ADDRESS: 6837 Farmdale Avenue, North Hollywood, CA 91605

SAMPLE: 24 HOUR TIME COMPOSITE FROM SAMPLE BOX

SAMPLED: BY JOSE BOLANOS OF ANACHEM LABORATORIES  
BETWEEN 12-27-05 AT 12:10 P.M. AND 12-28-05 AT 12:10 P.M.

<u>CONSTITUENT</u>	<u>CONCENTRATION</u>	<u>METHOD</u> <u>EPA</u>	<u>DETECTION LIMIT</u>
Arsenic, Total	< 0.10 mg/L	200.7	0.10 mg/L
Cadmium, Total	< 0.010 mg/L	200.7	0.01 mg/L
Chloride	130 mg/L	300.0	10 mg/L
Chromium, Total	0.43 mg/L	200.7	0.02 mg/L
Copper, Total	0.086 mg/L	200.7	0.02 mg/L
Lead, Total	< 0.050 mg/L	200.7	0.05 mg/L
Nickel, Total	0.45 mg/L	200.7	0.02 mg/L
Silver, Total	< 0.050 mg/L	200.7	0.05 mg/L
Zinc, Total	0.20 mg/L	200.7	0.01 mg/L

UNIFORM HAZARDOUS  
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas  
is not required by Federal law.

CA00000198093694221 of 1

3. Generator's Name and Mailing Address

PACIFIC MAGNETIC AND PENETRANT  
6837 FARMDALE AVE  
NORTH HOLLYWOOD, CA 91605

4. Generator's Phone ((818)765-7511

5. Transporter 1 Company Name

6. US EPA ID Number

MILES CHEMICAL COMPANY

CAD983613688

7. Transporter 2 Company Name

DR ENVIRONMENTAL  
WORLDWIDE WASTE

CA0981377864

CA0000118455

9. Designated Facility Name and Site Address

U.S. ECOLOGY  
U.S. HWY 95 11 MILES SOUTH  
BEATTY, NV 89003

10. US EPA ID Number

NVT3300T0000

A. State Manifest Document Number

24569422

B. State Generator's ID

C. State Transporter's ID [Reserved]

D. Transporter's Phone

(818)504-3355

E. State Transporter's ID [Reserved]

F. Transporter's Phone

(866)909-2782-334-55

G. State Facility's ID

H. Facility's Phone

(800)239-3943

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

RG HAZARDOUS WASTE SOLID, N.O.S.,  
(CHROMIUM), 9, NA3077, PGIII

12. Containers

No. Type

13. Total

Quantity

14. Unit

Wt/Vol

I. Waste Number

State 181

EPA/Other 0007

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

11A) FILTER CAKE / APP# 07-012-0810-43 / ADD EPA CODE D005

K. Handling Codes for Wastes Listed Above

03/99

15. Special Handling Instructions and Additional Information

WEAR APPROPRIATE PPE / ERG 171  
EMERGENCY CONTACT: CHEMTREC (800)424-9300

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

D COLIW

Signature

David C.

Month Day Year

04/10/06

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

MATT MILES

Signature

Matt Miles

Month Day Year

04/10/06

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

ADRIANA MORFIN

Signature

Adriana Morfin

Month Day Year

04/13/06

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Tom Dymond

Signature

Tom Dymond

Month Day Year

04/26/06

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.  
(Generators who submit hazardous waste for transport out-of-state,  
produce completed copy of this copy and send to DTSC within 30 days.)

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address <b>PACIFIC MAGNETIC AND PENETRANT</b> <b>6837 FARMPDALE AVE</b> <b>NORTH HOLLYWOOD, CA 91605</b>		CA 0000198093694241		A. State Manifest Document Number <b>24569424</b>	
4. Generator's Phone <b>(818)765-7511</b>		6. US EPA ID Number		B. State Generator's ID	
5. Transporter 1 Company Name <b>MILES CHEMICAL COMPANY</b>		CAD9836113688		C. State Transporter's ID [Reserved]	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone <b>(818)504-3355</b>	
9. Designated Facility Name and Site Address <b>U.S. FILTER RECOVERY SERVICES</b> <b>5375 S. BOYLE AVE</b> <b>LOS ANGELES, CA 90058</b>		10. US EPA ID Number <b>CAD097030993</b>		E. State Transporter's ID [Reserved]	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type		13. Total Quantity	
a. <b>OIL</b> <b>(NON RCRA HAZARDOUS WASTE LIQUID)</b>		1		14. Unit Wt/Vol	
b.				1. Waste Number State <b>223</b>	
c.				EPA/Other <b>NONE</b>	
d.				State	
				EPA/Other	
J. Additional Descriptions for Materials Listed Above <b>11A) MAG OIL APP# 340920-22</b> <b>2545317 - DTM74</b>		K. Handling Codes for Wastes Listed Above			
		a. <b>01/14</b>		b.	
		c.		d.	
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name <b>David Colin</b>		Signature <b>David C.</b>		Month Day Year <b>04/06</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>MATT MILES</b>		Signature <b>[Signature]</b>		Month Day Year <b>04/10/06</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name <b>[Signature]</b>		Signature <b>[Signature]</b>		Month Day Year <b>04/14/06</b>	

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.  
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.		2. Page 1		Information in the shaded areas is not required by Federal law.			
		CA0000198093694211				1 of 1					
3. Generator's Name and Mailing Address PACIFIC MAGNETIC AND PENETRANT 6837 FARMDALE AVE NORTH HOLLYWOOD, CA 91605						A. State Manifest Document Number 24569421					
4. Generator's Phone (818)765-7511						B. State Generator's ID					
5. Transporter 1 Company Name MILES CHEMICAL COMPANY						C. State Transporter's ID [Reserved]					
6. US EPA ID Number CAD983613688						D. Transporter's Phone (818)504-3355					
7. Transporter 2 Company Name						E. State Transporter's ID [Reserved]					
8. US EPA ID Number						F. Transporter's Phone ( ) -					
9. Designated Facility Name and Site Address PACIFIC RESOURCE RECOVERY 3150 E. PICO BLVD LOS ANGELES, CA 90023						G. State Facility's ID CA0008357405					
10. US EPA ID Number CAD008252405						H. Facility's Phone (800)499-7145					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity	14. Unit Wt/Vol	I. Waste Number	
						No.	Type				
a. RQ. WASTE ACETONE, 3,UN1090,PGII (D001)						003	DM	001/65	G	State 212 EPA/Other D001	
b.										State EPA/Other	
c.										State EPA/Other	
d.										State EPA/Other	
J. Additional Descriptions for Materials Listed Above 11A)WASTE ACETONE APP# 24090133 ADD WASTE CODE F003						K. Handling Codes for Wastes Listed Above 01					
15. Special Handling Instructions and Additional Information WEAR APPROPRAITE PPE / ERG# 127 EMERGENCY CONTACT# CHEMTREC (800)424-9300											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name DAVID CAIN				Signature David G		Month 04		Day 10		Year 06	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name MATT MILES				Signature MH		Month 04		Day 10		Year 06	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature		Month		Day		Year	
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name Javier Molina											
Signature Javier Molina				Signature UP		Month 04		Day 14		Year 06	

DO NOT WRITE BELOW THIS LINE.

Yellow TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.  
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)